

I. AMENDMENTS TO THE CLAIMS

Kindly amend claims 5, 16, 20, 24, 25, 26, 27 and 33 as follows.

The present listing of claims replaces all prior versions, and listings, of claims in the instant application.

Listing of Claims:

1. (Previously Presented) A composition for stabilizing or preserving biomolecules, comprising:

at least one non-reducing disaccharide; and

at least one protein or polypeptide of the LEA class.

2. (Previously Presented) A composition according to claim 1, wherein the non-reducing disaccharide is selected from the group consisting of trehalose (D-glucopyranosyl-D-glucopyranoside), sucrose (β -D-fructofuranosyl- α -D-glucopyranoside), as well as derivatives thereof.

3. (Previously Presented) A composition according to claim 1, wherein the non-reducing disaccharide is trehalose.

4. (Previously Presented) A composition according to claim 1, wherein the at least one protein or polypeptide of the LEA class has a motif comprising eleven amino acids, which is characterized by the following general formula (SEQ ID NO 1):

(1)-(2)-(3)-(4)-(5)-(6)-(7)-(8)-(9)-(10)-E,

wherein

(1) signifies K or T,

(2) signifies A, G, K, M or T,

(3) signifies R, D, A, E, Q or K,

(4) signifies E, K or S,

(5) signifies T, F, Y or A,

(6) signifies K, R, T or A,

(7) signifies D, E or Q,

(8) signifies S, R, Y or K,

(9) signifies A or T, and

(10) signifies G, A or R.

5. (Currently Amended) A composition according to claim 1, wherein said at least one protein or polypeptide of the LEA class is of LEA subclass 3 and further has an amino acid sequence coded by a nucleotide sequence selected from the group consisting of those deposited in GenBank under the accession number AF423069 ~~or~~ and S39475.

6. (Previously Presented) A composition according to claim 1, wherein said at least one protein or polypeptide of the LEA class is of LEA subclass 3 and further has a motif comprising 11 amino acids, wherein the motif is selected from the group consisting of:

- (a) K-T-A-E-F-R-D-S-A-G-E (SEQ ID NO. 2),
- (b) K-G-Q-E-F-K-E-R-A-G-E (SEQ ID NO. 3),
- (c) K-A-E-E-T-K-Q-R-A-G-E (SEQ ID NO. 4),
- (d) K-M-D-E-T-K-Q-R-A-G-E (SEQ ID NO.5),
- (e) K-A-R-K-T-K-D-S-A-A-E (SEQ ID NO. 6),
- (f) K-A-K-E-Y-K-D-Y-T-A-E (SEQ ID NO. 7),
- (g) K-A-R-E-T-T-E-K-A-R-E (SEQ ID NO. 8), and
- (h) T-K-D-S-A-A-E-K-A-R-E (SEQ ID NO. 9).

7. (Previously Presented) A composition according to claim 1, wherein said non-reducing disaccharide is present at from 0.01 to 15 weight percent in relation to a ready-to-use solution and said protein or polypeptide of the LEA class is present at from 0.00001 to 1 weight percent in relation to the ready-to-use solution.

8. (Previously Presented) A process for stabilizing or preserving a biomolecule comprising the steps of:
providing a composition in accordance with claim 1; and

incubating a biomolecule in the composition.

9. (Previously Presented) A process for stabilizing or preserving a biomolecule immobilized on a surface comprising the steps of:
providing a surface having a biomolecule immobilized thereon; and
covering the surface with the composition as defined in claim 1.
10. (Previously Presented) A surface with an immobilized and stabilized or preserved biomolecule, obtained by the process as defined in claim 9.
11. (Previously Presented) A surface, covered with the composition as defined in claim 1.
12. (Previously Presented) An analytic and/or diagnostic device, comprising a surface according to claim 10.
13. (Previously Presented) An analytic and/or diagnostic device, comprising a surface as defined in claim 11.
14. (Original) A device according to claim 13 selected from the group consisting of biochips, sensor chips, microtiter plates, test tubes and culture dishes.
15. (Cancelled)
16. (Currently Amended) A process for stabilizing or preserving ~~biomolecules~~
a biomolecule, comprising the steps of:
 - (a) providing a biomolecule immobilized on a surface; and
 - (b) covering the surface with a composition comprising:
 - i. at least one non-reducing disaccharide; and
 - ii. at least one protein of polypeptide of the LEA class.

17. (Previously Presented) A process according to claim 16, wherein the non-reducing disaccharide is selected from the group consisting of trehalose (D-glucopyranosyl-D-glucopyranoside), sucrose (β -D-fructofuranosyl- α -D-glucopyranoside), and derivatives thereof.

18. (Previously Presented) A process according to claim 16, wherein the non-reducing disaccharide is trehalose.

19. (Previously Presented) A process according to claim 16, wherein the at least one protein or polypeptide of the LEA class has a motif comprising eleven amino acids, which is characterized by the following general formula (SEQ ID NO 1):

(1)-(2)-(3)-(4)-(5)-(6)-(7)-(8)-(9)-(10)-E,

wherein

- (1) signifies K or T,
- (2) signifies A, G, K, M or T,
- (3) signifies R, D, A, E, Q or K,
- (4) signifies E, K or S,
- (5) signifies T, F, Y or A,
- (6) signifies K, R, T or A,
- (7) signifies D, E or Q,
- (8) signifies S, R, Y or K,
- (9) signifies A or T, and
- (10) signifies G, A or R.

20. (Currently Amended) A process according to claim 16, wherein said at least one protein or polypeptide of the LEA class is of LEA-subclass 3 and further has an amino acid sequence coded by a nucleotide sequence selected from the group consisting of those deposited in GenBank under the accession number AF423069 ~~or~~ and S39475.

21. (Previously Presented) A process according to claim 16, wherein said at least one protein or polypeptide of the LEA class has a motif comprising 11 amino acids, wherein the motif is selected from the group consisting of:

- (a) K-T-A-E-F-R-D-S-A-G-E (SEQ ID NO. 2),
- (b) K-G-Q-E-F-K-E-R-A-G-E (SEQ ID NO. 3),
- (c) K-A-E-E-T-K-Q-R-A-G-E (SEQ ID NO. 4),
- (d) K-M-D-E-T-K-Q-R-A-G-E (SEQ ID NO.5),
- (e) K-A-R-K-T-K-D-S-A-A-E (SEQ ID NO. 6),
- (f) K-A-K-E-Y-K-D-Y-T-A-E (SEQ ID NO. 7),
- (g) K-A-R-E-T-T-E-K-A-R-E (SEQ ID NO. 8), and
- (h) T-K-D-S-A-A-E-K-A-R-E (SEQ ID NO. 9).

22. (Previously Presented) A process according to claim 16, wherein said non-reducing disaccharide is present at from 0.01 to 15 weight percent in relation to a ready-to-use solution and said protein or polypeptide of the LEA class is present at from 0.00001 to 1 weight percent in relation to the ready-to-use solution.

23. (Cancelled)

24. (Currently Amended) A process for the production of a surface with an immobilized and stabilized or preserved ~~biomolecules~~ biomolecule, comprising the steps of:

(a) providing a surface with a biomolecule immobilized, ~~stabilized, or preserved~~ thereon; and

(b) covering the biomolecule with a composition comprising:

- i. at least one non-reducing disaccharide; and
- ii. at least one protein or polypeptide of the LEA class.

25. (Currently Amended) A surface with an immobilized and stabilized or preserved ~~biomolecules~~ biomolecule obtained through the process as defined by claim 16.

26. (Currently Amended) A component of an analytical and/or diagnostic device, wherein the component is a surface having a biomolecule immobilized ~~and stabilized or preserved thereon~~, covered with a stabilizing or preserving composition comprising:

at least one non-reducing disaccharide; and

at least one protein or polypeptide of the LEA class.

27. (Currently Amended) A surface of a material selected from the group consisting of glass, quartz glass, quartz, silicon, polymers, nitrocellulose, nylon and micro fiber membranes, and paper, wherein the surface includes ~~an immobilized and stabilized, or preserved biomolecule~~ a biomolecule immobilized, thereon, covered with a stabilizing or preserving composition comprising:

at least one non-reducing disaccharide; and

at least one protein or polypeptide of the LEA class.

28. (Previously Presented) A surface according to claim 27, wherein said non-reducing disaccharide is present at from 0.01 to 15 weight percent in relation to a ready-to-use solution and said protein or polypeptide of the LEA class is present at from 0.00001 to 1 weight percent in relation to the ready-to-use solution.

29. (Cancelled)

30. (Previously Presented) A surface according to claim 27, wherein the non-reducing disaccharide is selected from the group consisting of trehalose (D-glucopyranosyl-D-glucopyranoside), sucrose (β -D-fructofuranosyl- α -D-glucopyranoside), as well as derivatives thereof.

31. (Previously Presented) A surface according to claim 27, wherein the non-reducing disaccharide is trehalose.

32. (Previously Presented) A surface according to claim 27, wherein the at least one protein or polypeptide of the LEA class has a motif comprising eleven amino acids, which is characterized by the following general formula (SEQ ID NO 1):

(1)-(2)-(3)-(4)-(5)-(6)-(7)-(8)-(9)-(10)-E,

wherein

- (1) signifies K or T,
- (2) signifies A, G, K, M or T,
- (3) signifies R, D, A, E, Q or K,
- (4) signifies E, K or S,
- (5) signifies T, F, Y or A,
- (6) signifies K, R, T or A,
- (7) signifies D, E or Q,
- (8) signifies S, R, Y or K,
- (9) signifies A or T, and
- (10) signifies G, A or R.

33. (Currently Amended) A surface according to claim 27, wherein said at least one protein or polypeptide of the LEA class is of LEA-subclass 3 and further has an amino acid sequence coded by a nucleotide sequence selected from the group consisting of those deposited in GenBank under the accession number AF423069 ~~or~~ and S39475.

34. (Previously Presented) A surface according to claim 27, wherein said at least one protein or polypeptide of the LEA class is of LEA subclass 3 and further has a motif comprising 11 amino acids, wherein the motif is selected from the group consisting of:

- (a) K-T-A-E-F-R-D-S-A-G-E (SEQ ID NO. 2),
- (b) K-G-Q-E-F-K-E-R-A-G-E (SEQ ID NO. 3),
- (c) K-A-E-E-T-K-Q-R-A-G-E (SEQ ID NO. 4),
- (d) K-M-D-E-T-K-Q-R-A-G-E (SEQ ID NO.5),
- (e) K-A-R-K-T-K-D-S-A-A-E (SEQ ID NO. 6),
- (f) K-A-K-E-Y-K-D-Y-T-A-E (SEQ ID NO. 7),

(g) K-A-R-E-T-T-E-K-A-R-E (SEQ ID NO. 8), and

(h) T-K-D-S-A-A-E-K-A-R-E (SEQ ID NO. 9).

35. (Previously Presented) An analytical and/or diagnostic device, comprising a surface as defined in claim 27.

36. (Previously Presented) A device according to claim 35 selected from the group consisting of biochips, sensor chips, microtiter plates, test tubes and culture dishes.

37. (Previously Presented) An analytic and/or diagnostic device, comprising a surface as defined in claim 10.